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## DOUBLE-CLICK GENERATION METHOD FOR PEN OPERATIONS

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Disclosed is a method of generating a double-click event when a pen is used as an input device. The method uses not only button-down events but also mouse-movement events to generate a double-click event. The method uses the number of mouse-movement events generated between two consecutive button-down events, and the distance between the point of a button-down event and the point of a mouse-movement event.

A method of generating a double-click event of a mouse does not work well when a pen is used instead of a mouse. This is because a user can move a pen faster than a mouse and place a pen to a point faster and more easily than a mouse. The method described here can solve the problem.

Assume that events occur as follows:

```
button1 down event at (xd_1, yd_1, td_1)
mouse movement event at (xm_1, ym_1, tm_1)
.....
mouse movement event at (xm_k, ym_k, tm_k)
button1 down event at (xd_2, yd_2, td_2),
```

where first two numbers show the position of an event and the last number shows the time of the event. The method detects a double-click event when

```
|xd_1 - xd_2| < a,
|yd_1 - yd_2| < b,
td_2 - td_1 < c,
k < d,
max(|xm_1 - xd_1|, ..., |xm_k - xd_1|) < e,
max(|ym_1 - yd_1|, ..., |ym_k - yd_1|) < f,
```

are satisfied.

The described method generates a double-click event when two consecutive button-down events occur in the predefined area and in the predefined period, the number of mouse-movement events between two button-down events is less than the predefined number, and a pen does not go outside of the predefined area during two button-down events.